State of Delaware

State Highway Department

Official Program

The Delaware Memorial Bridge

Dedication Ceremonies

August 15, 1951

For Free Distribution Only

Delaware Memorial Bridge

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Delaware Memorial Bridge

ORDER OF DEDICATION CEREMONY

WEDNESDAY, AUGUST 15, 1951—11:00 A.M.

THE NATIONAL ANTHEM — Delaware National Guard Band

INVOCATION — Colonel Park W. Huntington, Chaplain, U.S.A.R.
Minister, St. Stephen's Lutheran Church, Wilmington

PRESENTATION OF DISTINGUISHED GUESTS — J. H. Tyler McConnell
Chairman

DEDICATION — The Honorable Elbert N. Carvel
Governor of Delaware

RESPONSE — The Honorable Alfred E. Driscoll
Governor of New Jersey

IN MEMORIAM: HONOR GUARD — Veterans of Foreign Wars
Atterbury Post No. 3420 of Wilmington

PLACING OF THE WREATH—

FOR DELAWARE: — James P. Connor
Congressional Medal of Honor

FOR NEW JERSEY: — Carlton Rouh
Congressional Medal of Honor

BENEDICTION — Father Joseph A. Enright
Pastor, St. Mary's Church, Wilmington

Immediately following the Benediction, the Formal Opening and Official Inspection of The Delaware Memorial Bridge by Governor Elbert N. Carvel and Official party will take place. Only cars bearing "Official" markers will be allowed on Bridge at this time.

Delaware Memorial Bridge

AFTERNOON EVENTS

WEDNESDAY, AUGUST 15, 1951

Noon to 7:00 p.m.	Free Public Inspection of Bridge by Pedestrian Traffic and by Special Bus only. The public is cordially invited to inspect the Bridge and free transportation will be provided. Buses will leave the Toll Plaza Area on continuous runs across the Bridge and return, stopping at the East Tower Pier and the West Tower Pier where visitors may alight from the buses and inspect the structure. The return trip will pick up visitors and discharge them at the Toll Plaza Area. Ample free parking space for the public is available near the Toll Plaza. There will be no charge for the bus service. No cars other than the free Official Buses will be permitted on the Bridge during this public inspection period.
7:00 p.m. to 11:59 p.m.	Bridge closed to all traffic.
12:01 a.m. August 16.	Bridge Open for Business at Regular Toll Rates.

The Delaware Memorial Bridge

The Delaware Memorial Bridge, containing the sixth longest suspension span in the world, is the culmination of two and one-half years of dramatic marine and highway construction which was preceded by many years of careful planning and study. It involved the expenditure of some $44,000,000 and for the first time physically connects the states of Delaware and New Jersey. By connecting these great states with a four lane divided highway of concrete and steel, it affords a vital and much-needed link in their respective highway systems and greatly strengthens the transportation network of the nation.

Pleasure, business and commercial vehicles traveling along the Atlantic seaboard, whether between the great industrial areas such as Boston, New York, Philadelphia, Wilmington, Baltimore and Washington, or from any of the metropolitan areas of the east to Florida or the southeast, will find that the use of the bridge will save them at least one-half hour and frequently many times that in crossing the Delaware River. When used in conjunction with the soon-to-be-completed New Jersey Turnpike, a saving of several hours can be realized. During the first year of operation it is anticipated that the average daily traffic over the bridge will be 13,000 vehicles and that on peak days over 30,000 vehicles may use the bridge. The bridge is designed to accommodate any vehicle regardless of size or weight which could legally operate over the highways of the state, even though such vehicles were lined bumper to bumper over the four lanes of the bridge.

The Delaware Memorial Bridge will keep alive and improve those American habits of industry and pleasure which have so inalterably committed this country to highway transportation. In order that these benefits may be enjoyed at once, the bridge is being opened to traffic immediately upon its structural completion even though such use is in advance of the final completion of painting, lighting and other finishing work.

The bridge, including its approaches, extends for a distance of three and one-half miles with the bridge itself measuring more than two miles from abutment to abutment. It has a suspended span of 2,150 feet in the center with side suspended spans of 750 feet each. The clearance under the center span is 190 feet above mean highwater which is sufficient to permit the channel underneath to accommodate the largest Naval and commercial vessels afloat. This is a necessary requirement since the Delaware River alone affords access to the Port of Philadelphia, its large Navy Yards and the other shipping centers which crowd its shore.

The piers of the two main towers of the bridge extend 89.5 and 118.5 feet, respectively, below the average river level to a foundation of stiff marine clay. The cables over the tops of these towers are 440 feet above the water, giving to the structure a maximum overall height of 558.5 feet, which is roughly equivalent to the height of a 45-story office building.

The huge anchorages which hold the ends of the cables on which the actual bridge floor is suspended have overall heights of 233 and 257 feet, respectively. Two hundred and twenty automobiles could be parked on the area of clay covered by one of these anchorages, the lowest portion of which rests under water in a 32-foot thick layer of 27,000 cubic yards of concrete which required seven and one-half continuous days to pour. The concrete in one anchorage alone is sufficient to have paved a 24-foot wide concrete highway for a distance of 23 miles, and contains over 5,000 tons of steel.

The clay beneath the major foundations was compressed during construction and will continue to consolidate at a decreasing rate until final stability is attained. During the construction period, these massive supports have settled an average of three inches which is actually less than was predicted. An additional downward movement of about four inches is anticipated before they come to final position after some 50 or more years of use.

The towers, cables, suspending and suspended structure contain over 20,000 tons of steel and enough pencil-sized wire in the cables to measure 50 times around the state of Delaware. The total amount of structural steel used throughout the entire project is approximately 43,000 tons. Notwithstanding this, the structure is necessarily designed to perform in a flexible manner. Under various conditions of loading, winds and temperature, the tops of the towers are expected to move as much as 14 inches toward the shoreline and up to 15 inches toward the main span. The accompanying up and down motions at the center of the main span will raise the roadway 4.4 feet or lower it 6.6 feet. Under the greatest anticipated wind velocity, the main suspended span may move as much as 8.9 feet from its normal position. All such movements, however, occur so slowly and cover such a period of time as to render it imperceptible except with instruments.

The entire planning and construction of the project was carried on under the direction of the Delaware State Highway Department and was financed on a self-amortizing basis by bond issues authorized by the Legislature of the State of Delaware. The completed project is dedicated as a magnificent memorial to those men and women of the State of Delaware and of the State of New Jersey who gave their lives in the Armed Forces of the United States of America during World War II.

Wilmington, Delaware
August 1, 1951

J. H. T. McC.
W. A. McW.

DELAWARE MEMORIAL BRIDGE

1948 1951

THIS BRIDGE IS DEDICATED TO THOSE MEN AND WOMEN
OF THE STATE OF DELAWARE AND THE STATE OF NEW JERSEY
WHO GAVE THEIR LIVES IN THE ARMED FORCES OF THE
UNITED STATES OF AMERICA DURING WORLD WAR II

Its successful completion was contributed to by
many including the following

MEMBERS OF THE GENERAL ASSEMBLIES
OF 1945 1947 1949 and 1951 AND OF
THE 79TH CONGRESS

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Dedicatory Prague